

James River Richmond, Bacteria Implementation Plan Steering Committee Meeting #3

Monday 4/11/11

In Attendance: Kemper Loyd (VDH), Ed Cronin (Greeley and Hansen), Keith Burgess (Monacan SWCD), Grace LeRose (City of Richmond), Michelle Virts (City of Richmond), Craig Lott (DEQ), Margaret Smigo (DEQ), David Bernard (Sierra Club and Coastal Canoeists), Ram Gupta (DCR), John Newton (Henrico Co.), Sarah Stewart (Richmond Reg. Planning Dist. Comm.), Debbie Byrd (Goochland Co.), Chris French (Alliance for Ches. Bay), Leigh Dunn (Goochland Co.), Kelley West (DEQ), Mark Alling (DEQ), Megan Maggard (MapTech)

Agenda:

- Introductions & Affiliations
- Draft IP Presentation and Overview - Megan Maggard (MapTech)
 - Comments questions about presentation
- Chesapeake Network Presentation - Chris French (Alliance for the Chesapeake Bay - ACB)

In our last SC meeting, we discussed the use of a website where stakeholders could discuss ongoing watershed implementation as well as experiences with BMPs. This "forum" could also house documentation such as tables and maps and perhaps be an interactive tool where those with limited access (select users) could update lists of implemented actions or BMP efficiencies. This forum would be a benefit because the Implementation Plan is a snapshot of current conditions. As we go through implementation over the next 10-20 years, the thought was that it could be a tool for adaptive management as water quality and technology will change over time. It could also be the central location for implementation related activities for this project. Chris French (ACB) volunteered the use of the Chesapeake Network as a possible site for such a forum. Chris's presentation will provide an overview of the site and its usability.

 - Does steering committee have any questions/concerns about the use of the Chesapeake Network site for the forum? Are there any other options to be considered?
 - What sort of things would the steering committee like the site to include or offer the ability to do in a forum?
 - Would you like to see additional information related to the forum (any of the information we've talked about) further outlined in a section of the draft IP?
- Open discussion/questions about draft report (v16)

Maptech Presentation – Steering Committee Comments:

- Slide 4- Map of impairments- comment that the whole James River upper (near Bernards Creek) should be added to map
- Slide 5- need a zoomed in map
- Slide 6- need an explanation of why there is a need to improve quality
- Slide10- IP development - Outlines "actions", should say outlines recommendations to improve water quality
- Slide 11- Where are we now? -Please put months (Nov 2010) in instead of numbers (11/10)
- Slide 12- Should allude to what BMP's are in the plan
- Slide 13- Assessments of Needs – Debbie said we should include financial assistance, (don't take it out) because that is a big part of "needs" if we are going to meet goals
- Slide 14- Ag BMP's Needed- Keith mentioned agriculture folks will think 252 acres conservation tillage is nothing, you should leave off the figures because if a farmer see's that they will think the number is not worth it – its almost better to not include the figure for that BMP b/c that might limit what farmers are

willing to do. Chris thought it might be a good idea to leave that figure in b/c that might be a way of throwing them a bone. Keith recommended changing verbiage to "increase conservation tillage". Ram said to change the NRCS to 528 instead of 512.

-Slide 15- Livestock Exclusion Practices- Chris said if you are going to take a picture out remove the one on the far left. Keith asked if it would be beneficial to include the bacteria reduction credits for each. If you put the % reduction, people would get a better idea of how far each practice will get us toward the goal.

-Slide 17- Residential/urban BMPs Needed- Grace asked what will be the regulatory driver for septic system repairs (how will we make people repair systems) and how to accomplish it? Craig said it depends on the locality, we do not mandate any the BMPs included in an IP, and neither is DEQ saying localities must implement BMPs included in the IP. Ed said it's easy to know when a system is failing but it's hard when you don't know when it is failing. Grace said its fine to include in the IP, but we should state the regulatory way to enforce. Craig said Chesterfield County is the only county that gave us a recommendation for sewer-connections based on VDH failures in their watershed over past 10yrs. Grace asked, will 750 failing septic systems will be required? Craig/Megan said perhaps the thing to do is change the slide from "needs" to "recommendations". We need to include the language that says VDH is the agency which regulates/permits septic systems (Kemper Loyd agreed after the meeting to provide appropriate language to include). Grace asked, if VDH is involved in repairs and replacements why do we have so many failing systems? How do they find all the problems and how do they fix all the problems? She said, there needs to be clear steps of what the pathway is to getting them corrected, this is a big issue, the more specific and direct it is it will be helpful. Craig mentioned at the Lynchburg Steering Committee meeting they got to this point also. Chris stated that James City has one of the best pump out programs. Megan asked Grace if this topic could be clarified in the report and not the presentation to which Grace responded it should be included in the presentation because the public should know and be aware of the issue and clearly understand who is responsible for fixing them. You should add a slide after this one that shows how to identify a failing system and information about it. Michelle asked if DEQ would add efficiencies here, because the City of Richmond is concerned about the quality of the data for efficiencies. Ram stated that we don't need to put numbers of dog waste refill bags on the slide, however, Keith thought inclusion of the numbers were important b/c it shows the public the amount of bags that are needed (160,000 might make an impression).

Slide 18- should include information regarding how a citizen can detect and fix a failing system

Slide 20- What's in the plan- Keith said that for Stage I, it looks like we saying that City Of Richmond doesn't have to do anything in the first 10 years because stormwater-reductions come in Stage 2. By not mentioning LID in the first 10 years are we hurting ourselves in the long run by limiting practices? It looks as though we are targeting agriculture. ED said the document talks about additional reductions which will need to be done even after the LTCP. Grace suggested this slide would be the appropriate time to talk about upgrades that have been done to the CSO system and tell the public what is being done currently. Megan said she has asked Ed for wording related to CSO improvements to include in the IP but has never received it. Chris said that if we talked about completed BMPs here, it would address Keith's' concerns and perhaps we could tie it in to the James de-listed segments. Showing completed BMPs here would show what's been done and that no particular groups are being "targeted". You can add a slide after 10 that say's "where are we now".

-Slide 21- Urban Stormwater reduction BMP's-Ram asked if the statement on the slide would be included in the IP (it should be)? Ed said he would send Megan verbiage to update IP.

-Slide 22- Volume reduction- Michelle – said she'd like to hand the information on this slide to their administration to ensure the language is consistent with their permits.

-Slide 23- Vegetated roofs- Michelle asked why Almond and Gillie are singled out in this slide. She stated Richmond's concerns are with the selection of the removal efficiencies and the most expensive BMP's were also selected. Their concern with stage 2 BMP's are that we are setting the plan up for failure. Grace asked how do you get the home owners to put these on the ground? Chris suggested we look at programs that have been completed elsewhere for proposals on how to get homeowners in on IP; there are model programs that are already being done in other areas we can look at (ie Riverscapes in DC) We should look at these programs at another meeting, if this is adopted by localities then that would be a start. Grace stated that if a BMP is called in the IP, a road map be provided to tell you how to get it done. There was a brief exchange b/w Craig and City of Richmond folks where Craig explained that DEQ does not want to be prescriptive in the IP. By being too specific, it might limit people's thought processes in the long run about the multitude of ways one might achieve these goals. Examples can be provided if that is what the Steering members would like to see. Ed stated that the TMDL report reduction for CSOs is conflicting with what the City plans in the LTCP, some of the information about the CSO's in the IP should be pulled out so people will not be confused. DEQ's permit for the City will be the path for meeting the reductions, not the IP. Megan suggested the SW BMP's be combined in a slide and that way people know that these are options rather than what is "mandatory". Obviously, it will be made clear that the entire IP is just a plan and nothing suggested within it will be enforceable. Keith brought up that this slide presentation is for the general public so it's unlikely that some folks will be interested in or understand the more technical information. This meeting is not the place to put out technical information. It is up to the Steering Committee to explain to boards and others that request technical information and details.

Craig suggested we tell the public that this IP is just one way to meet the standard. We can say we have the benefits and the costs that are associated with these particular options.

Mr. Bernard said what you might expect from a larger meeting is concerned citizens, city council members, board of supervisors, they will say there has been an incredible amount of technical people that really know their stuff, but naturally, DEQ is hesitant to be prescriptive because of the cost. I understand that the questions are still there, everyone at the meeting may be looking for or expecting specifics. However, you shouldn't propose a 20 year plan and then say it "might work" or "maybe work". He said as far as figures for Agricultural, those should be kept in. Urban BMP's are the most expensive ways to go, and there are a lot of questions about efficiencies and cost. The IP could state we are still working on Urban BMP's but we want to go ahead with pet waste and agriculture BMP's because we know how to deal with it and we know what the efficiencies are and that they are indeed cost effective. John Newton said in regard to urban BMP's, the localities don't regulate everything. Henrico can't force someone who doesn't drain to their MS4 system to do something to reduce SW. It's important that when we talk about BMP's we need to explain who is going to be the driving force for getting them installed.

Michelle said there is no sound science for bacteria BMPs yet so you can't say anything about the number of green roofs that should be put in.

-Slide 28- How are we going to pay for it? Chris asked if this could be made into 2 slides? Keith said there are more private funds than what you have listed. Ram said most of the funding listed is for agriculture and residential, but, are there any funds out there for stormwater BMPs? Michelle stated that some of the funding is the same.

-Slide 31 -DEQ stations – Margaret will fix map

(Supplemental) Slide 37-Grace stated that Crooked Branch is missing from the chart. Was the new data collected by the reedy creek folks? Mark stated it was collected by DEQ and citizens. Grace asked us to identify which is citizen data and which are these BST data. (Mark did) She stated she was confused because the TMDL report (BST) listed the human contribution at 9%, pet at 11%, and wildlife higher, therefore, how do we get to compliance knowing that 80% is wildlife? How are you going to account for wildlife in meeting the standard?

Slide 38- Ed stated in regard to table ES1 in the draft, he was comparing that to table 6-13 and was surprised because in Phase 3 we showed there are no excedances. If we are not addressing wildlife consistent that does not seem consistent. Virginia and EPA do not require that any wildlife bacteria load reductions be in an IP (no matter what the BST data shows).The TMDL/IP process is not the arena for dealing with background bacteria loads NOR is it where a wildlife management plan is written. Wildlife Management Plans can be suggested and written/conducted OUTSIDE/AFTER the IP is in place if stakeholders feel it is needed.

Ram asked on 6-13 when you say there is 0% violation do you say all the Combined Sewer Outfalls have been taken care of? Megan answered no, a 0% a violation means we met the GM standard per the computer model, and the bacteria load reductions were achieved. There has never been any discussion or text that says "all the Combined Sewer Overflows are taken care of". Alternative E was assumed to be completed by year "20" at the end of Stage II in the timeline.

Chesapeake Network Forum:

Following Craig's introduction and Chris's overview, Margaret asked the group if they had questions or concerns about using the Chesapeake forum? None were stated. Any other ideas on what we could use it for? None were stated. She asked in regard to including references of the Chesapeake Network "forum" in the IP document there are only 2 small references. Would the steering committee like to see additional information? Chris stated he didn't have a preference for using the Network. John stated the key will be to getting the word out, we need to collaborate in one form or another, it is a way to start. Sarah Stewart stated she has heard about this from many people and thinks it's a great option. Craig asked for a show of hands if we should use the Forum, how many localities would be interested in using this? Majority of members raised their hands. Chris stated that if anyone wants to use it, he would rather people here start it or be the "administrator" but it was not a site that had to be managed. Chris suggested we make sure that VITA would be okay with this. Margaret mentioned she was already a member of the Chesapeake Network and has had no issues (but still a very good idea to make sure).

Question/Discussion:

Ed: The IP is really to address the NPS, however many people will look at the document so it needs to be documented that this is one example of how to meet standards and that it will address regional assurance or NPS but some of the tables address watersheds with CSOs. Where we have the % reductions in CSO watersheds, that it is not how the LTCP is written. The IP is addressing areas the City does not own and would be difficult to meet the number of BMPs suggested. There will be two

documents that the public will have access to (TMDL and IP). Anything where we can identify a process for how we come into compliance with the WLA we should make that effort and we also need to document what this will cost. Megan asked Ed to send a revised paragraph in (pg 5-32).

Ram had a question for 5-49, said there is no section in the benefit of urban and residential BMP's Ram also mentioned in Table 6-13, it is good to indicate that all the BMP's in the LTCP have been taken care of (if that is the case – needs to include language which states what has been done and what is planned). Lynchburg LTCP was not included (reference might help) and that Megan should add the City's choice in the LTCP, "Alternative E" to the table.

John Newton said pg 5-45 in last sentence under technical assistance; he said that sentence make it sound like localities are in charge of BMP's. We need to make sure the public knows every BMP cannot be done by localities because the localities do not own all property in the watershed.

Grace stated that John's point should be reiterated that for private property, the homeowner will be responsible for the entire process of the BMP.

Keith said we should also include that it's in the public's best interest to implement the BMP's because they quite possibly will become mandates eventually. It's better to do it now while there is cost-share available to help them.

Craig stated that this is where a "forum" and central repository for discussion/documents/etc would be useful to stakeholders and the general public. If the "implemented" list of BMPs are maintained anyone can go on and see what works and a homeowner can decide what the real efficiencies are and where to put their money.

Spelling errors Pg 15- line 4, Chesapeake Baby

Pg 1-3 second paragraph- 200, should be 2006

Chickahominy was spelled wrong several places

Ram stated in table 5-13 in calculating CSO overflows, what is there a reason to go that far back? Megan explained this was due to the calibration period – those years included specific flow events (5 yr storm, etc.) the age has no bearing on the integrity of the data.

Ed stated again that the IP tables are not out of the LTCP, there are different approaches, the COR is looking at water quality, if you are looking at the two differences we ultimately look at geometric mean because that is what the permit is based on. That fact is not referenced in the body of the IP. The City looks at volume of water opposed to cost.

Meeting Adjourned ~5pm.

City of Richmond 4/25/11 provided DEQ with text for IP regarding the CSO and LTCP:

Richmond's original wastewater collection system, formed in the late 1800s, was comprised of combined sewer pipes carrying both sanitary sewage and stormwater runoff to the James River. For the past 40 years, Richmond has invested several hundred million dollars, largely through funds raised by ratepayers, to alleviate combined sewer overflows (CSOs). To date, the City of Richmond has completed two phases of its CSO Control Plan and is implementing Phase III CSO Controls.

Phase I CSO Controls, completed in the 1980s, consisted of construction of the Shockoe Retention Basin and upgrading the wet weather treatment capacity at the Richmond wastewater treatment plant (WWTP) to empty the Shockoe Retention Basin in two days. The Shockoe Retention Basin is a 50-million-gallon (MG) offline storage facility (35 MG in the retention basin itself and 15 MG in system conduit storage) that retains the "first flush" combined sewer flow from the City's largest CSO basin, the 8,000-acre Shockoe Creek CSO area.

In 1988, the City completed a comprehensive CSO study defining the Long-Term Control Plan (LTCP) for CSOs discharging to the James River and Gillies Creek. The State Water Control Board (SWCB) approved the plan in March 1989. The City began implementing the LTCP in 1992 under a special agreement with the Virginia Department of Environmental Quality (DEQ), which initiated the Phase II CSO Controls. Completed Phase II projects are as follows:

- CSO Project No. 1 – Southside conveyance system between Canoe Run and near Mayo's Island completed in 1998.
- CSO Project No. 2 – Southside conveyance system between 42nd St & Canoe Run completed in 1998.
- CSO Project No. 3 – Northside conveyance system between Park Hydro and Shockoe completed in 1998.
- CSO Projects Nos. 4 & 5 – Hampton & McCloy CSO Retention Tunnel completed in 2003.

For Phase I & II CSO controls, the City invested \$242 million dollars funded largely by its ratepayers. This more than doubled the percentage of James River miles meeting bacteriological water quality standards (34% prior to CSO Control and 70% after Phase II CSO controls for Richmond and 20 miles downstream). The City complied with all of the CSO Special Order requirements, including the requirement to re-evaluate the final phase of its CSO Control Plan and to develop a LTCP after completing the Phase II controls. The CSO LTCP Re-Evaluation final report dated January 2, 2002, identified elements of potential Phase III CSO controls, referred to as "Plan E". Plan E is estimated to cost approximately \$400 to \$500 million in 2010 dollars, bringing the total cost to address CSOs to approximately \$750 million dollars. DEQ has concurred with Plan E and the City has entered into a CSO Special Order by Consent issued by the State Water Control Board that includes the elements of Plan E.

The Order also requires the Board to determine that "Plan E satisfies all the criteria under Section II.C.4.b.i and ii of the CSO Policy" prior to proceeding with construction of the larger CSO controls in Requirements 13 through 19. During the August 31, 2004 Board meeting, the Board approved the CSO Special Order by Consent and directed DEQ to conduct

the Water Quality Standards Coordination defined in Section III of EPA's CSO Control Policy.

EPA's CSO Policy requires an approved LTCP to meet water quality standards. The EPA's CSO Control Policy states, "*the planned control program will provide the maximum pollution reduction benefits reasonably attainable*" (CSO Policy - Section II.C.4.b.iii). The City continues to try to develop controls "*to allow cost effective expansion or cost effective retrofitting if additional controls are subsequently determined to be necessary to meet WQS or designated uses*" (CSO Policy -Section II.C.4.b.iv).

The current version of the bacteria TMDL for Gillies Creek indicates that additional CSO controls are required beyond those identified in Plan E of the City's CSO LTCP. The City is concerned that waste load allocations identified in the TMDL do not appear to be "*reasonably attainable*".

In order to complete the Water Quality Standards Coordination process, the City requested that the State Water Control Board allow the City to conduct a Use Attainability Analysis to provide the City the opportunity to determine if the Gillies Creek paved channel CSO waste load allocations in the TMDL are "*reasonably attainable*". Although the State Water Control Board did not act on DEQ's recommendations, the Board voted in favor of the following:

- 1. Recognize that the City of Richmond can conduct a use attainability analysis for recreational uses in Gillie Creek according to criteria established pursuant to the Clean Water Act.*
- 2. Request that the City include in the use attainability analysis a detailed examination of how any change to the recreational use in Gillie creek would avoid impacting the primary contact recreational use of the James River adjacent to, and downstream of, the confluence with Gillie Creek.*
- 3. Direct the staff to report to the Board upon completion of the UAA study whether the results of the study are deemed consistent with federal and state regulations and warrant initiating a regulatory process to consider removal of the recreational use or establishing a subcategory of recreational use in Gillie Creek."*

The City of Richmond is in the process of updating the LTCP to meet WQS in Gillie's and Almond Creek. Richmond has indicated that the development of a UAA for the Gillies Creek paved channel will help the City identify the most appropriate investments in water quality and inform the public of changes to the City's CSO LTCP through an adaptive management process. Large CSO storage facilities do not lend themselves to phasing opportunities. The UAA process will help the City understand the compliance endpoint before investing 500 million dollars in additional CSO controls.

As of April 2011, the City has completed construction of 11 out of 19 Special Order requirement projects and a functioning element of No. 17. The schedule for implementing the remainder of Phase III CSO controls is based on the Special Order by Consent and will depend on the outcome of the UAA study for the Gillies Creek paved channel.

**VDH recommended text for JG3 IP – septic failure response procedure submitted by Kemper Loyd
4/22/11**

The *Emergency Regulations for Alternative Onsite Sewage Systems*, adopted in April, 2010, require that all alternative onsite sewage treatment systems in Virginia be visited at least annually by a licensed operator. However, the Virginia Department of Health (VDH) does not currently have the authority, the mandate or the resources to require or conduct similar surveillance of all conventional onsite sewage treatment (septic) systems in the Commonwealth. (Note that, as resources allow, VDH may conduct or assist with such surveys that target localized areas of specific concern.)

Given the above limitations, VDH generally learns of failed septic systems directly or indirectly from the owners of those systems or through complaints from neighbors or other government agencies. Reports of straight pipes are less-frequently received from either source, since they are generally located in less-populated areas and are typically sited/intended to avoid detection.

When VDH receives a report of a non-compliant system, it performs a site inspection, if necessary, to verify the report. VDH then works with the homeowner to address the issue in an effective, timely and regulatory-compliant manner, generally through installation of a septic or alternative onsite system, repair or replacement of an existing system and/or failed components of that system, connection to a central collection/treatment system, or other appropriate measure(s). In the case of non-cooperative homeowners, VDH initially attempts to achieve compliance through internal enforcement actions and, ultimately, through the court system.

An impasse may be reached when a homeowner is willing, but financially unable to correct the non-compliance. In such situations, VDH assists in attempting to locate funding for the needed corrections, with the knowledge that many of the existing funding sources (State Revolving Loan Fund, Water Quality Improvement Fund, etc.) have significant shortcomings with regard to the onsite wastewater treatment arena. VDH, DEQ, and DCR have discussed those shortcomings and have agreed to collaborate in an effort to identify sources of financial assistance for owners of onsite wastewater systems located in the watersheds of impaired waters.